

CLAIMS

1. An information processing apparatus comprising:
a first storage unit;
a processor for executing a program written in the first storage unit;
a second storage unit for storing a plurality of encrypted programs into which a program is divided; and
a secure module capable of performing operations of:
receiving the program stored in the second storage unit;
returning the received program to an executable state;
writing the program, which has been returned to the executable state, in the first storage unit in a sequence for the processor to execute; and
deleting the program, which has been executed by the processor, from the first storage unit after execution is completed,
wherein the processor transmits the program stored in the second storage unit to the secure module.

2. The information processing apparatus according to claim 1, wherein the secure module is further capable of judging whether or not an execution request signal for a divided program has been received, and returns the received program to the executable state when it is judged that the execution request signal has been

received.

3. The information processing apparatus according to claim 2, wherein the secure module is further capable of storing information for identifying each divided program to judge whether said divided program is a program which is to be kept resident in the first storage unit before program execution, or a program which is not to be written in a memory before execution.

4. The information processing apparatus according to claim 1, wherein the secure module is further capable of storing information for identifying each divided program to judge whether said divided program is a program which is to be kept resident in the first storage unit before program execution, or a program which is not to be written in a memory before execution.

5. An information processing apparatus comprising:
a first storage unit;
a processor for executing a program written in the first storage unit;
a second storage unit for storing a plurality of encrypted programs into which a program is divided and rewrites itself with invalid code just before the program is completed; and
a secure module capable of performing operations of:
receiving the program stored in the second storage

unit;

returning the received program to an executable state;

writing the program, which has been returned to the executable state, in the first storage unit in a sequence for the processor to execute; and

deleting the program, which has been executed by the processor, from the first storage unit after execution is completed,

wherein the processor transmits the program stored in the second storage unit to the secure module.

6. The information processing apparatus according to claim 5, wherein the secure module is further capable of judging whether or not an execution request signal for a divided program has been received, and returns the received program to the executable state when it is judged that the execution request signal has been received.

7. The information processing apparatus according to claim 6, wherein the secure module is further capable of storing information for identifying each divided program to judge whether said divided program is a program which is to be kept resident in the first storage unit before program execution, or a program which is not to be written in a memory before execution.

8. The information processing apparatus according to claim

5, wherein the secure module is further capable of storing information for identifying each divided program to judge whether said divided program is a program which is to be kept resident in the first storage unit before program execution, or a program which is not to be written in a memory before execution.

9. An information processing apparatus comprising:

- a first storage unit;
- a processor for executing a program written in the first storage unit;
- a second storage unit for storing an encrypted program; and
- a secure module capable of performing operations of:
 - receiving the program stored in the second storage unit;
 - dividing the received program into a plurality of programs;
 - returning each divided program to an executable state;
 - writing the program, which has been returned to the executable state, in the first storage unit in a sequence for the processor to execute; and
 - deleting the program, which has been executed by the processor, from the first storage unit after execution is completed,

wherein the processor transmits the program stored in the second storage unit to the secure module.

10. The information processing apparatus according to claim 9,

wherein the second storage unit further stores information on division of a program correspondingly to the stored program, and

the secure module divides the received program into a plurality of programs based on the information on division of the program.

11. An information processing apparatus comprising:

a first storage unit;

a processor for executing a program written in the first storage unit;

a second storage unit for storing an encrypted program; and

a secure module capable of performing operations of:

receiving the program stored in the second storage unit;

dividing the received program into a plurality of programs, and making each of the plurality of divided programs to be a program which rewrites itself with an invalid code just before the program is completed;

returning each divided program to an executable state; and

writing the program, which has been returned to the executable state, in the first storage unit in a sequence for the

processor to execute,

wherein the processor transmits the program stored in the second storage unit to the secure module.

12. The information processing apparatus according to claim 11,

wherein the second storage unit further stores information on division of a program correspondingly to the stored program, and

the secure module divides the received program into a plurality of programs based on the information on division of the program.

13. An information processing apparatus comprising:

a first storage unit where a plurality of programs, into which a program has been divided, are kept resident before execution;

a processor for executing the programs written in the first storage unit;

a second storage unit for storing an encrypted call program which calls divided programs as an execution program; and

a secure module capable of performing operations of:

receiving the call program stored in the second storage unit;

returning the received call program to an executable state;

writing the call program, which has been returned to a

corresponding executable state, in the first storage unit in a sequence for the processor to execute a divided program; and

deleting the call program, which has been executed by the processor, from the first storage unit after execution is completed,

wherein the second storage unit transmits the call program stored in the second storage unit to the secure module.

14. The information processing apparatus according to claim 13,

wherein the first storage unit further stores link information which is information to specify a call relationship between the divided programs, and

the secure module detects a sequence to execute the divided programs based on the link information.

15. An information processing apparatus comprising:

a first storage unit where a plurality of programs, into which a program has been divided, are kept resident before execution;

a processor for executing the programs written in the first storage unit;

a second storage unit for storing an encrypted call program, which calls divided programs just before the program is completed as each execution program which rewrites itself with invalid code; and

a secure module capable of performing operations of:
receiving the call program stored in the second storage unit;
returning the received call program to an executable state; and
writing the call program, which has been returned to the corresponding executable state, in the first storage unit in a sequence for the processor to execute divided programs;
wherein the second storage unit transmits the call program stored in the second storage unit to the secure module.

16. The information processing apparatus according to claim 15,

wherein the first storage unit further stores link information which is information to specify a call relationship between the divided programs, and

the secure module detects a sequence to execute the divided programs based on the link information.